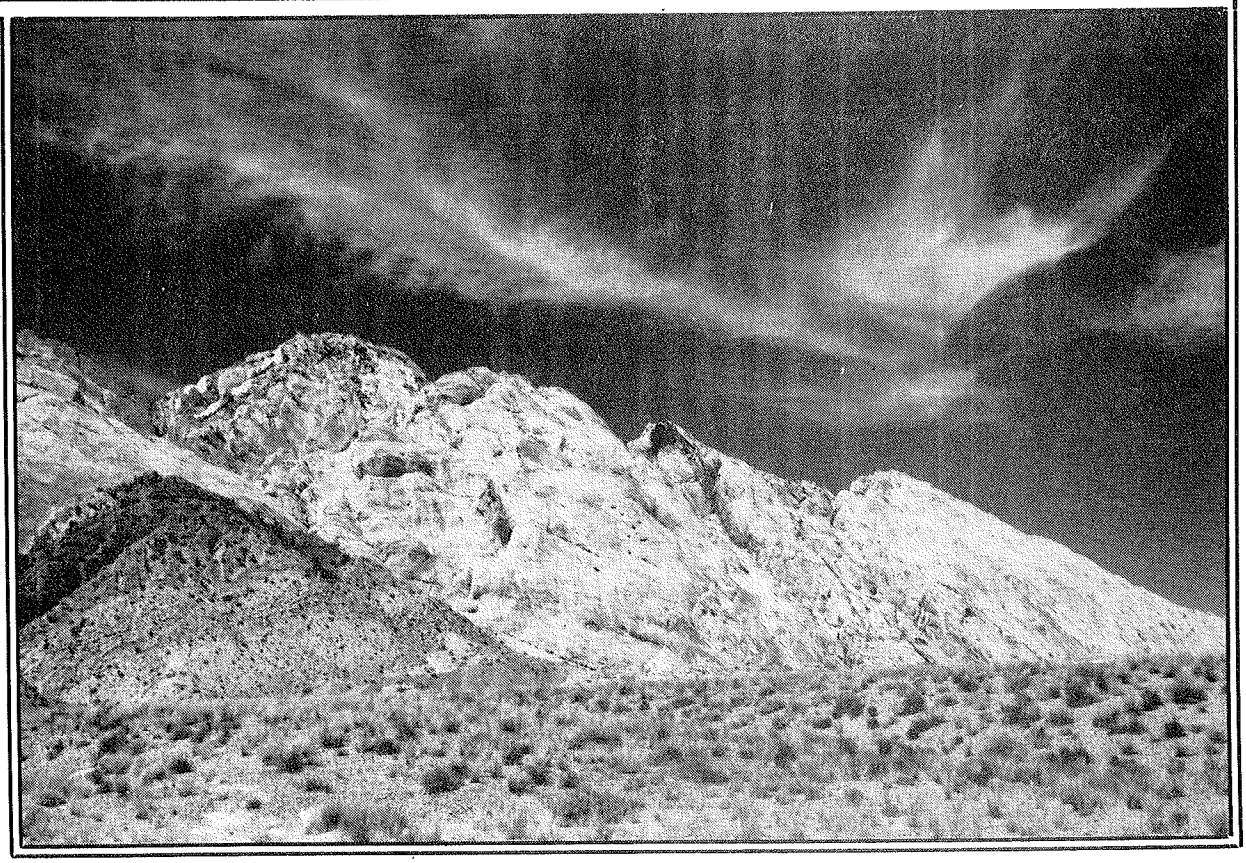
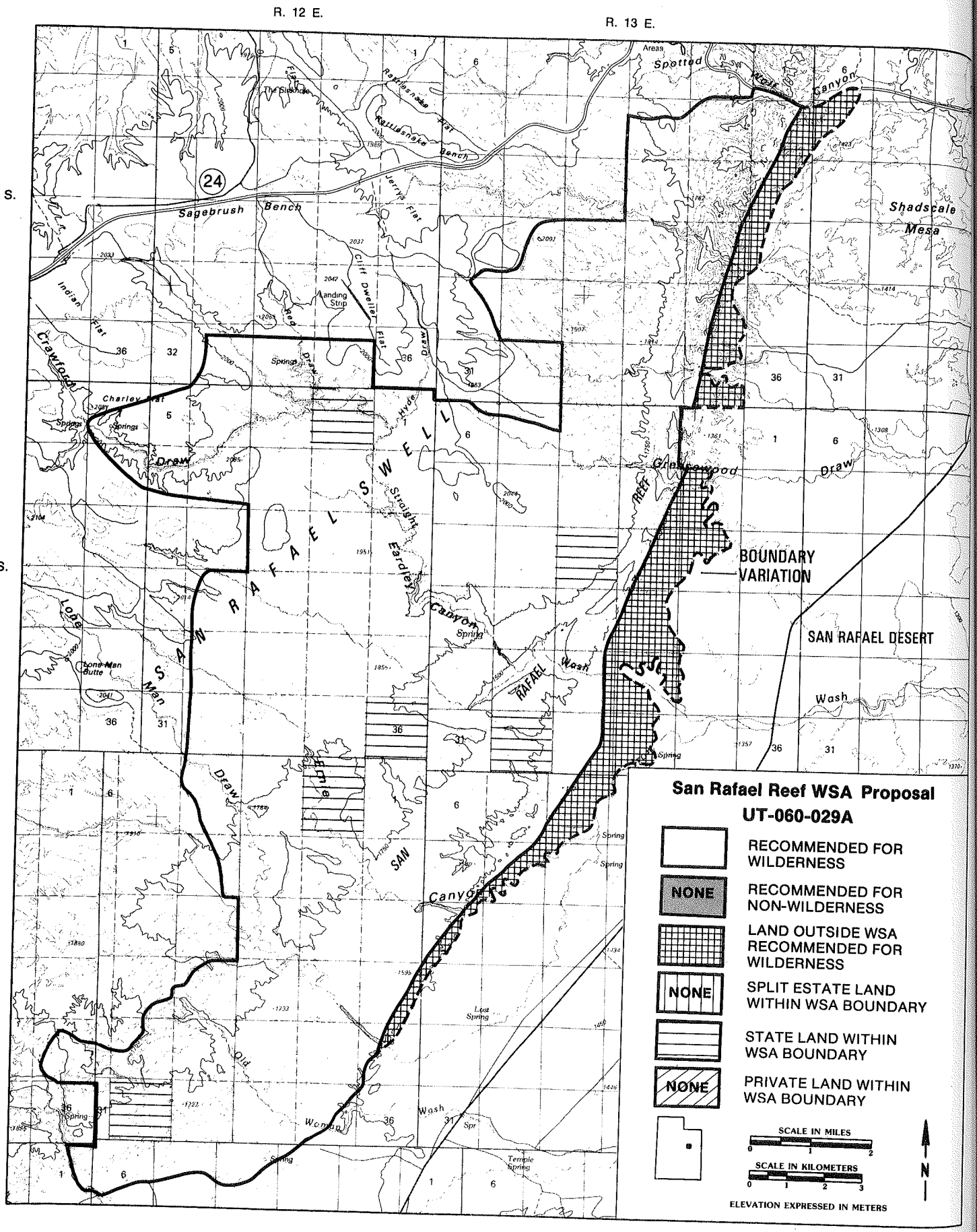
San Rafael Reef WSA



SAN RAFAEL REEF WSA



SAN RAFAEL REEF WILDERNESS STUDY AREA

1. THE STUDY AREA: 59,170 acres

The San Rafael Reef Wilderness Study Area (WSA) (UT-060-029A) is in Emery County, about 18 miles west of Green River, Utah (population 1,048). The study area is about 22 miles long, from north to south, and 6 to 8 miles from east to west. The northern tip of the WSA is adjacent to Interstate Highway 70 (I-70). The eastern boundary of the study area is a portion of the cliff that forms the eastern face of the San Rafael Reef, a highly eroded broad upwarp that is a major geographic feature in central Utah. The western boundary of the WSA is along terrain features, roads, and legal subdivisions (see Map).

The WSA is 1 mile northeast of the Crack Canyon WSA (UT-060-028A) and about 2 miles south of the Mexican Mountain WSA (UT-060-054). The San Rafael Reef WSA contains 55,540 acres of public land administered by the Bureau of Land Management (BLM). An additional 3,630 acres of public land outside the east boundary of the WSA are part of BLM's recommended area, bringing the total area studied to 59,170 acres. There are six State sections (4,029 acres) inheld in the study area (see Table 1).

The study area is on the eastern edge of the San Rafael Swell. The San Rafael Reef is a nearly north-south trending hogback that dips steeply eastward.

TABLE 1
LAND STATUS AND ACREAGE SUMMARY IN THE STUDY AREA[a]

	ACRES
WITHIN THE WSA	
BLM (surface and subsurface)	55,540
Split-Estate (BLM surface only)	0
In-holdings (State, Private)	4,029
Total	59,569
WITHIN THE RECOMMENDED WILDERNESS BOUNDARY	
BLM (within the WSA)	55,540
BLM (outside the WSA)	3,630
Split-Estate (within the WSA)	0
Split-Estate (outside the WSA)	0
Total BLM land recommended for wilderness	59,170
In-holdings (State, private)	4,029
WITHIN THE AREA NOT RECOMMENDED FOR WILDERNESS	
BLM	0
Split-Estate	0
Total BLM land not recommended for wilderness	0
In-holdings (State, Private)	0

Source: BLM File Data

[a] The Appendix is a detailed table of in-holdings included within the portion of the WSA recommended for designation.

SAN RAFAEL REEF WILDERNESS STUDY AREA

The central and northern parts of the WSA are composed mostly of multicolored sandstone mesas, faulted and jointed so as to give a checkerboard appearance. The rest of the study area consists of canyons from 200 to 1,000 feet deep that drain eastward, and domes and vertical fins characteristic of the San Rafael. Fins (i.e., massive rock blades) jut vertically from the desert floor in the northeastern part of the study area. Elevations in the WSA range from 4,800 feet along the eastern base of the Reef to 6,600 feet in the central and northern portions. Vegetation is predominantly pinyon and juniper, covering three-fourths of the area, especially in the inner, higher parts of the WSA.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Utah BLM Statewide Wilderness Environmental Impact Statement (EIS) finalized in November 1990. Two alternatives were analyzed in the EIS: an all wilderness alternative, which is the recommendation in this report, and a no wilderness (no action) alternative.

Subsequent to publication of the Utah BLM Statewide Wilderness Final EIS, the Utah State Director approved the San Rafael Resource Area Resource Management Plan (RMP). The plan included 39,910 acres of the San Rafael Reef WSA in the San Rafael Reef (north portion) Area of Critical Environmental Concern (ACEC) to protect unique vegetation and scenic values. Special management requirements now in effect within the ACEC include limiting off-highway vehicles (OHVs) to designated roads and trails, closure to oil and gas leasing, proposed withdrawal from locatable mineral entry, and management of the area to meet Class I visual resource management (VRM) guidelines, where consistent with valid existing rights. In addition, the majority of the ACEC and WSA has been identified as "primitive"' through the Recreation Opportunity Spectrum (ROS) classification system (ROS-P class). Therefore, most of the WSA is closed to OHV use to manage for ROS-P class.

2. RECOMMENDATION AND RATIONALE:
   59,170 acres
   (recommended for wilderness)
   0 acres
   (not recommended for wilderness)

The recommendation for this study area is to designate the entire area as wilderness. This is the environmentally preferable alternative as it would result in the least change from the natural environment over the long term. The recommendation will further apply to any additional in-holding acreage acquired through purchase or exchange with willing owners. The Appendix lists all inholdings and provides additional information on acquisition.

All of the study area meets the naturalness criterion and has outstanding opportunities for primitive recreation. About 99 percent of the study area has outstanding opportunities for solitude.

Special features include scenic, historic, and geologic values. The sawtooth ridge of sandstone on the Reef is a unique landform.

Almost all of the area recommended for wilderness designation is within the San Rafael Reef ACEC and ROS-P class, where restrictions on OHV use, mineral and energy exploration and production, and management for protection of scenic values would continue to be administratively applied if the area is released from wilderness consideration and protection of wilderness characteristics is not a management objective.

Uranium resources exist in the WSA and there is long-term potential for future development through small mines. Uranium resources exist in the WSA. However, the potential for development is low, due to high exploration and recovery costs. No other significant locatable or leasable mineral production would be foregone. Uranium also may be found in the same geologic formations elsewhere in the vicinity, however, and the San Rafael Reef probably would not be essential for future market needs. No conflicts exist with other resources.

3. CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATION

Wilderness Characteristics

A. Naturalness

Naturalness is defined as an attribute in which the evidence of man is substantially unnoticeable to the average visitor and where minor imprints of man exhibit no cumulative impact that is substantially noticeable.

The entire 59,170-acre study area is considered natural in character. The major imprints surrounding the San Rafael Reef WSA were eliminated by boundary adjustments during the BLM Intensive Wilderness Inventory. What remains are approximately 10 miles of ways and trails, an oil drill site, and several tunnels and associated mining buildings and equipment.

A way that probably resulted from mineral exploration in the first drainage south of Old Woman Wash is about 4 miles long and ends on a bench. It is little used and is substantially unnoticeable. Another way about 2 miles long, south of Arson's Garden, leads to an old drill site. Both the way and drill site are disappearing, although there is some travel on the way.

Several other trails about 3.5 miles in total length exist in the WSA and are in Straight Wash, the first canyon north of Straight Wash, portions of Iron Wash, and the first major canyon north of Temple Wash, on the west side of the Reef. The trails are eroded, making them substantially unnoticeable. Some off-highway vehicle (OHV) travel has occurred in the wash bottoms, but flooding has tended to erase the signs of use. All of these ways, trails, and wash bottoms are within ROS-P class, and are now closed to OHV use by administrative decision in the San Rafael RMP.

Two tunnels and mine shacks in two drainages along the northeast half of the Reef look old enough to be historic and they blend into their primitive environment. Also, an old-fashioned drill rig is near a way north of Ernie Canyon. The way is about a 0.5 mile in length, and both the way and rig are substantially unnoticeable within the study area.

Altogether, these imprints cover about 2,800 acres (less than 5 percent) of the area. The remaining acreage (56,370 acres) is essentially untouched. No surface-disturbing activities have occurred since the wilderness inventory, and naturalness has not been affected.

B. Solitude

In more than 99 percent of the study area (58,578 acres), the opportunities for solitude meet the criteria for outstanding. The remaining 592 acres, less than 1 percent of the WSA, do not meet the standards for outstanding opportunities for solitude.

The many incised drainages through the Reef offer passages for the user to experience seclusion and isolation. The twisting character of the canyons and the 10 to 1,000 foot cliffs effectively shroud lines of sight and suppress sounds for any substantial distance within these canyons. Off-site intrusions and influences are essentially nonexistent within these canyons.

The sandstone knobs, petrified dunes, checkerboarded mesas, and jutting fins in the higher parts of the WSA are intermittently open and provide good vantage points. To the east is the San Rafael Desert, to the west is the mesa of the swell, and to the north and south is the sawtooth ridge of the Reef. Vegetation cover is sparse in some areas and does not effectively screen visitors. The rolling terrain and immensity of the area promote the feeling of seclusion and remoteness.

From specific points within the WSA, several dirt roads and traffic on Highway 24 (3 miles east) and I-70 (adjacent to the north boundary) can be seen outside the WSA. Their observation is not necessarily intruding and may actually, as a comparison, emphasize the remoteness of the users' recreational experience. Within a 0.25 mile of I-70, sounds from traffic are very noticeable and at times intruding. Because of the imposition of these sounds, the opportunity for solitude is less than outstanding in the area. During the spring months the

sounds from OHV activity near the southern boundary of the WSA also disturb the sense of solitude.

C. Primitive and Unconfined Recreation

The entire study area meets the standards for outstanding opportunities for primitive and unconfined recreation because of the unusual topographic character of the WSA, outstanding hiking, rock scrambling, and camping options, the presence of water sources, a rare collectable agate, and other recreation opportunities. Educational groups, rock hounds, and backpackers hike in the canyon drainages through the Reef to observe and study the historic, prehistoric, and geologic qualities.

During the spring holidays, recreationists travel to the desert to enjoy the warm weather. OHV use, the main recreational activity, is concentrated adjacent to the southern portion of the WSA. Due to the restrictive character of the WSA's topography, many of these recreationists explore the area by foot. Opportunities for hiking, backpacking, rock scrambling, art, photography, and scenic viewing are outstanding.

Many isolated pools of water provide contrast to the dry, desolate character of the WSA. The dramatic nature of the Reef's formations with its sheer-walled cliffs, pinnacles, knobs, twisted canyons, colors, and historic and prehistoric remnants all contribute to the quality of recreational experiences.

D. Special Features

The canyons of the WSA expose numerous geologic strata. The upper reaches of the study area provide dramatic views of arches, caves, and narrow, textured passageways within the WSA and of the great upthrust of the San Rafael Reef and its many fins and folds.

Approximately 45 percent (26,626 acres) of the study area is rated outstanding for scenic quality.

The rare grape agate, thought to occur in only a few other places in the country is found in the WSA.

Evidence of past mining activity can be found near the northeastern and southwestern boundaries of the WSA. Shacks, cabins, and mine shafts dot the area, providing a historic flair to the natural surroundings. Evidence of the old Green River to the Hanksville wagon trails also add historic significance to the WSA.

Desert bighorn sheep, a wildlife species associated with wilderness, is found in the WSA. Cougars may occasionally visit the area. Black-footed ferrets and peregrine falcons, listed as endangered species, and an additional nine animal species considered sensitive also may inhabit or use the WSA.

Two plant species, Maguire daisy, (Erigeron maguirei var. maguirei) and Wright fishhook cactus (Sclerocactus wrightiae), listed as endangered species, occur or may occur in the WSA. The Jones cyclodenia,(Cyclodenia humilis var. jonesii), is a threatened species that occurs within the WSA. Also, the Last Chance townsendia,(Townsendia aprica), a threatened species may occur in the WSA. Seven other bird species and five other plant species that are considered sensitive also occur, or may occur, in the WSA. Refer to Appendix 4 and the Affected Environment, Vegetation and Wildlife Including Special Status Species sections of the Utah BLM Statewide Wilderness Final EIS for additional information.

Diversity in the National Wilderness Preservation System (NWPS)

A. Expanding the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this study area would add a combination of potential natural vegetation (PNV) ecosystems not presently represented in the NWPS.

PNV is the vegetative type that would eventually become climax vegetation if not altered by human interference, and is not necessarily the vegetation that is currently present in an area.

SAN RAFAEL REEF WILDERNESS STUDY AREA

The study area is in the Colorado Plateau Province/Ecoregion. The PNV in the area is galleta-threeawn shrubsteppe (35,502 acres), juniper-pinyon woodland (13,885 acres), and saltbush-greasewood (9,783 acres). Juniper-pinyon woodland PNV is well represented in the NWPS nationally and in other BLM study areas both in and outside of Utah, and is represented in one wilderness in Utah. Galleta-threeawn shrubsteppe PNV is not represented at all in the NWPS, however, and saltbush-greasewood PNV is represented in the NWPS in only one designated wilderness, which is in Utah. This information is summarized in Table 2 from data compiled in December 1989.

B. Assessing the Opportunities for Solitude or Primitive Recreation within a Days Driving Time (5 Hours) of Major Population Centers

The study area is within a 5-hour drive of the Salt Lake City-Ogden, Utah and Provo-Orem, Utah standard metropolitan statistical areas.

Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of these population centers.

TABLE 2
ECOSYSTEM REPRESENTATION

	NWPS AREAS		OTHER BLM STUDIES	
BAILEY-KUCHLER CLASSIFICATION (PNV)	**AREAS**	**ACRES**	**AREAS**	**ACRES**
NATIONWIDE (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	155,224
Juniper-Pinyon Woodland	11	1,401,745	84	2,130,120
Saltbush-Greasewood	1	20,000	17	384,220
UTAH (COLORADO PLATEAU PROVINCE)				
Galleta-Threeawn Shrubsteppe	0	0	10	155,224
Juniper-Pinyon Woodland	1	26,000	53	1,692,313
Saltbush-Greasewood	1	20,000	17	384,220

Source: BLM File Data.

TABLE 3
WILDERNESS OPPORTUNITIES FOR RESIDENTS OF MAJOR POPULATION CENTERS

	NWPS AREAS		OTHER BLM STUDIES	
POPULATION CENTERS	**AREAS**	**ACRES**	**AREAS**	**ACRES**
Salt Lake City-Ogden, Utah	11	1,099,962	78	2,200,505
Provo-Orem, Utah	11	721,793	90	2,727,698

Source: BLM File Data.

C. Balancing the Geographic Distribution of Wilderness Areas

The San Rafael Reef study area could contribute to balancing the geographic distribution of wilderness areas within the NWPS. As of January 1987, the NWPS included 44 areas comprising 3,443,330 acres in Utah and Colorado, the adjacent state nearest the WSA.

A San Rafael Reef Wilderness would supplement the NWPS in the Canyonlands Section of the Colorado Plateau where there are just two established wilderness areas totaling 70,751 acres.

There are three designated wilderness areas within 100 miles of the WSA. To the northwest is the 28,000-acre Mt. Nebo Wilderness (U.S. Forest Service [FS]), to the southeast is the 45,000-acre Dark Canyon Wilderness (FS), and to the southwest is the 25,751-acre Box-Death Hollow Wilderness (FS).

Manageability (The area must be capable of being effectively managed to preserve its wilderness character.)

The entire WSA can be managed as wilderness to preserve values now present in the area. Current uses such as livestock grazing and maintenance of rangeland developments would continue with little or no effect on wilderness values. A herd of about 35 wild burros would continue to use part of the WSA, where management actions would continue as at present. Even though there are 6,940 acres of post-FLPMA oil and gas leases in the WSA, the leases are subject to nonimpairment of wilderness values and it is expected that they will expire and not be renewed.

There are 16,140 acres of mining claims in the WSA. Because there is some potential for uranium deposits in the WSA, it is expected that a portion of these and future claims existing at the time of designation will be explored and possibly developed. It is projected that uranium exploration and development would disturb approximately 64 acres of the WSA following wilderness designation, but this would not affect the over all manageability of the study area. The presence of six State in-holdings (4,029 acres) scattered through the central and southern portions of the study area could create additional manageability problems because BLM would be required to provide reasonable access to State lands and would have no control over activities on State lands. About 640 acres of the in-held State land is leased for oil, gas, and hydrocarbons and all of the in-holdings are leased for grazing. Because there is some potential for uranium in the WSA, it is projected that in the foreseeable future uranium exploration and development on State land could reduce wilderness values in parts of the recommended wilderness.

About 910 acres of public water reserve withdrawals would be compatible with wilderness management and would remain in effect following wilderness designation.

Energy and Mineral Resource Values

The U.S. Geological Survey (USGS) and the U.S. Bureau of Mines (USBM) prepared a mineral assessment report for the San Rafael Swell WSAs, including the San Rafael Reef WSA (USGS Bulletin 1752, Susan Bartsch-Winkler, et al., N.D.). Commodities evaluated include uranium, geothermal energy, gypsum, limestone, oil and gas, sand and gravel, sandstone, semiprecious gemstones, petrified wood, and tar sand. The report indicates that within the Carmel Formation, inferred subeconomic resources of about 668,000 tons of gypsum are present in the San Rafael Reef WSA.

The mineral resource potential is high for localized, thin tar sands of variable grade. The resource potential for gypsum on the surface is high in the eastern and southeastern part of the WSA. The eastern and southeastern part of the WSA have high resource potential for uranium and vanadium in the Chinle Formation. The resource potential is low for metals other than uranium and vanadium, including gold and copper. The resource potential for minor, localized sulfur deposits is also low in the WSA. The resource potential for bentonite in the Chinle Formation on the surface and in the subsurface is low in the eastern and southeastern part of the San Rafael Reef WSA. The resource potential for

carbon dioxide and helium gases is moderate.

Impacts on Resources

The comparative impact table (Table 4) summarizes the effects on pertinent resources for alternatives considered including designation or nondesignation of the area as wilderness.

Local Social and Economic Considerations

Over the long term, designation of the study area as wilderness would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Up to 100 fewer jobs would be provided by locatable mineral activities with this alternative. Recreation-related expenditures could contribute up to $14,293 annually at the end of 30 years. Livestock grazing would continue to contribute $26,880 annually in livestock sales and $2,070 in Federal revenues. Up to $115,800 in Federal and State mineral lease revenues would be foregone each year.

Summary of WSA-Specific Comments

Public involvement has occurred throughout the wilderness review process. Comments received during the early stages of the EIS preparation were used to develop significant study issues and alternatives for the ultimate management of the WSA.

During formal public review of the Draft EIS, a total of 360 inputs specifically addressing this WSA were received from 1,010 commenters, including oral statements received at 17 public hearings on the EIS. Each letter or oral testimony was considered to be one input. Duplicate letters or oral statements by the same commenter were not counted as additional inputs or signatures. Each individual was credited with one signature or testimony regardless of the number of inputs. In general, 110 commenters supported wilderness designation for part or all of the WSA, while 453 commenters were opposed. Four hundred and forty-seven commenters addressed the relative merits of the EIS but took no formal position on wilderness designation.

Those favoring wilderness commented that the WSA includes wilderness values and that wilderness designation would protect those values and wildlife and curtail OHV use in the area. The majority of those commenting in favor of wilderness were from other states.

Those opposing wilderness were concerned that wilderness would restrict public access and livestock management, harm State and local economies, and cause Federal regional air quality designation to become more restrictive. Most of those opposing wilderness designation were from rural Utah.

One Federal agency, the National Park Service (NPS) commented on the Draft EIS for this WSA. The NPS expressed no opinion regarding wilderness designation, but recommended identifying the WSA as a National Natural Landmark.

No comment letters were received on the Final EIS.

There are six State sections in the WSA. In commenting on the Draft EIS, the State of Utah expressed general opposition to wilderness designation, but did not take a definite position regarding wilderness designation of the WSA. The State commented that the WSA is considered to rank highest for wilderness values and low for significance of conflicts compared with other WSAs in the San Rafael Reef. Specific State comments dealt with clarifications in geology and the total acreage figure of the WSA.

The San Rafael Reef study area is in Emery County, Utah. The Zoning Resolution of Emery County classified the WSA as potential future mining and grazing land. The Emery County Commission is opposed to wilderness designation for the WSA and has endorsed the Consolidated Local Government Response to Wilderness that opposes wilderness designation of BLM lands in Utah. In commenting on the Draft EIS, the Commission noted that wilderness designation would conflict with the Emery County Master Plan and lead to more restrictive standards on air and visual quality that would have a significant adverse impact on future development in the County. The Commission believes that none of the man made sites in the study area qualify as

historical sites and that in-held and adjacent State sections, as well as customary use by the local population, will limit the potential for management of the area as wilderness. The Commission further noted that the area is penetrated by too many roads to qualify as roadless.

SAN RAFAEL REEF WSA

Table 4
Comparative Summary of Impacts by Alternative[a]

Issue Topic	Alternatives Recommendation All Wilderness (59,170 Acres)	No Action/No Wilderness
Impacts on Wilderness Values	Wilderness designation would preserve overall the wilderness values in the WSA. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 64 acres because of uranium exploration and development on valid mining claims and development of access to in-held State lands. Opportunities for solitude and primitive recreation would be indirectly reduced in quality on up to an additional 2,366 acres. Special features would be preserved overall, although Class A scenery could be reduced in quality in disturbed and surrounding areas.	Wilderness values would not be protected by wilderness designation and loss would occur as intrusions increase. In the foreseeable future, naturalness and opportunities for solitude and primitive recreation would be directly lost on 206 acres of the WSA because of uranium exploration and development and development of access to in-held State lands. These values would be indirectly reduced in quality on up to an additional 11,834 acres. Class A scenery would be reduced in quality in the disturbed and surrounding areas. Future mining and access roads to State in-holdings, and other vehicular use would detract from naturalness and opportunities for solitude and primitive recreation in the WSA. Most of the WSA would remain closed to OHVs..
Impacts on Soils	With implementation of this alternative, soil loss from the WSA would be expected to increase by 1 percent (321 cubic yards per year) over the current rate. This would be 2 percent (643 cubic yards per year) less than with the No Action/No Wilderness Alternative.	Soil loss from the WSA would increase by 3 percent (964 cubic yards per year) over the current rate. There would not be significant secondary off-site effects because the projected disturbance would not be along perennial streams and mitigation would be required.
Impacts on Vegetation	Vegetation types and threatened, endangered, or other special status plant species would be protected by this alternative because projected disturbance would be reduced from 206 acres to 64 acres. Appropriate inventories, clearances, and consultation with FWS would be completed prior to surface disturbance.	Vegetation types and populations of threatened, endangered, or other special status plant species would not be significantly affected because the 206 acres of projected surface disturbance would affect less than 0.4 percent of the WSA. Impacts from OHV use would be minimal because the majority of the area would remain closed to OHVs.

SAN RAFAEL REEF WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives Recommendation All Wilderness (59,170 Acres)	No Action/No Wilderness
Impacts on Mineral and Energy Exploration and Production	Wilderness designation would limit potential exploration and development opportunities for locatable minerals known to occur in the WSA to those under valid mining claims at the time of designation. Although some production would occur, opportunities for production of an unknown portion of the uranium in the WSA would be foregone. No other significant locatable or leasable mineral production would be foregone because the probability of development is low even if the area is not designated wilderness.	Mineral and energy exploration and production would not be affected because mineral leasing, location of mining claims and mineral developments would not be restricted for the protection of wilderness values. In the ACEC and ROS-P class, plans of operation would continue to be required on all valid claims, no oil and gas leases would be issued, and the area would be proposed for withdrawal from locatable mineral entry.
Impacts on Wildlife Habitat and Populations	Approximately 0.1 percent (64 acres) of the wildlife habitat would be disturbed. Wilderness designation would protect all wildlife species and provide additional solitude over the short and long term.	About 0.4 percent (206 acres) of the wildlife habitat in the WSA would be directly disturbed. OHV use would not be allowed. Therefore, wildlife habitat and populations including special status species would not be significantly affected.
Impacts on Visual Resources	VRM class objectives would not be met on 0.1 percent (64 acres) of the WSA because of uranium exploration and development and construction of access to in-held State lands. Visual quality would be reduced on the disturbed and surrounding areas but would be preserved on the remainder of the WSA.	VRM class objectives would not be met on 0.4 percent (206 acres) because of uranium exploration and development and construction of access roads to State in-held lands. Visual quality would be reduced on the disturbed areas and on surrounding view areas.
Impacts on Cultural Resources	Very little impact to cultural resources is expected under this alternative because potential disturbance would be reduced from 206 to 64 acres. Cultural resource management may be limited in scope and execution in order to preserve other wilderness values.	Impacts due to surface disturbance are expected to be minimal because only 0.4 percent (206 acres) of the WSA would be disturbed and mitigation would be required. Cultural resource management would continue without regard for protection of other wilderness values.

SAN RAFAEL REEF WSA

Table 4 (Continued)
Comparative Summary of Impacts by Alternative

Issue Topic	Alternatives: Recommendation All Wilderness (59,170 Acres)	Alternatives: No Action/No Wilderness
Impacts on Recreational Use	Primitive recreational values in the WSA would be protected and primitive use would increase at a rate of 2 to 7 percent annually over the next 30 years. The quality of primitive recreational use would be directly reduced on 0.1 percent (64 acres) and indirectly reduced on up to additional 4 percent (2,366 acres) of the WSA.	Primitive recreation values would continue to be protected, since most of the area would remain closed to OHVs. The quality of primitive recreation would be reduced on and near areas where other surface-disturbing activities occur. This could occur directly on 206 acres and indirectly on up to 20 percent (11,834 acres) of the WSA. Primitive recreational use would increase by 2 to 7 percent annually over the next 30 years.
Impacts on Local Economic Conditions	Over the long term, wilderness designation would cause a slight change in local economic conditions from those that would occur with the No Action/No Wilderness Alternative. Up to 100 fewer jobs would be provided by locatable mineral activities with this alternative. Recreation-related expenditures could contribute up to $14,293 annually at the end of 30 years. Livestock grazing would continue to contribute $26,880 annually in livestock sales and $2,070 in Federal revenues. Up to $115,800 in Federal and State lease revenues would be foregone each year.	Present economic conditions would not be affected. Locatable mineral activity could increase employment in Emery County by 3.0 percent (200 jobs) by the year 2010. Recreation-related expenditures would contribute up to $14,239 annually to the local economy by the year 2020. Livestock grazing would contribute $26,880 annually in livestock sales and $2,070 in Federal revenues. Present and future oil and gas leases could contribute up to $115,800 annually in Federal and State lease revenues.

[a] The BLM San Rafael RMP was approved following publication of the BLM Utah Statewide Wilderness EIS. The analysis of impacts summarized here has been modified to reflect the more restrictive resource management practices established by the RMP.

SAN RAFAEL REEF WILDERNESS STUDY AREA

Appendix
Estimated Costs of Acquisition of Non-Federal Holdings Within Areas Recommended for Designation [a]

Legal Description (Prior to any Subdivision)	Total Acreage	Number of Owners (If Parcel has been subdivided)	Type of Ownership by Estate (Federal, State, Private, Other) (Surface Estate)	(Subsurface Estate)	Presently Proposed for Acquisition (Yes, No)	Preferred Method of Acquisition (Purchase, Exchange, Other)	Estimated Cost of Acquisition (Land Costs)	(Processing Costs)
T. 23 S., R. 12 E., Sec. 2	639.92		State	State	No	Exchange		$2,000
T. 23 S., R. 12 E., Sec. 36	640.00		State	State	No	Exchange		$2,000
T. 23 S., R. 13 E., Sec. 16	640.00		State	State	No	Exchange		$2,000
T. 23 S., R. 13 E., Sec. 32	639.00		State	State	No	Exchange		$2,000
T. 24 S., R. 12 E., Sec. 2	830.44		State	State	No	Exchange		$2,000
T. 24 S., R. 12 E., Sec. 32	640.00		State	State	No	Exchange		$2,000

[a] The estimated costs listed in this appendix in no way represent a Federal appraised value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estates with similar characteristics to those included in the WSA. The estimates are for purposes of establishing a range of potential costs to the government of acquiring non-Federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in this appendix.